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## Cross-protection induced by influenza: from infection to vaccines

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Propositions

Wei Dong

### **Cross-protection induced by influenza: from infection to vaccines**

1. Sequential administration of readily available seasonal whole inactivated virus influenza vaccines could provide partial cross-protection in case of a new pandemic. (This thesis)
2. Memory immune responses generated by previous influenza virus infection are helpful for protection against infection by variant influenza virus strains.
3. Multiple immune mechanisms are required for optimal cross-protection. (This thesis)
4. Vaccination with a combination of mucosal adjuvants and whole inactivated influenza vaccines is a promising strategy to enhance cross-protection. (This thesis)
5. Influenza virosomes with conjugated antigen and adjuvant incorporated in the membrane are effective in priming of CTLs in vivo. (This thesis)
6. Previous infection by unrelated pathogens can have profound effects on influenza vaccine induced immune responses. Specific pathogen free mice are thus not a good model to evaluate the effectiveness of vaccines in a natural situation. (This thesis)
7. Be thankful for all the rude, obnoxious and difficult people, you meet in your life, they serve as important reminder how NOT to be.
8. Chance favors the prepared mind. (Louis Pasteur)
9. 非淡泊无以明志，非宁静无以致远。（诸葛亮）

If you don't look at the fame and fortune in front of you, you won't have a clear ambition. If you can't study calmly, you can't achieve your lofty goals. (Zhuge Liang)